



2005 Minerals Yearbook

QATAR

THE MINERAL INDUSTRY OF QATAR

By Philip M. Mobbs

Qatar is located adjacent to Saudi Arabia on a 11,437-square-kilometer peninsula in the Persian Gulf. The nation's mineral output, which was dominated by hydrocarbons, also included the production of clay, dolomite and limestone, gypsum, helium, sand, and shale. Processed mineral-based commodities included ammonia, cement, direct-reduced iron (DRI), lime, methanol, crude steel, sulfur, and urea.

According to the International Monetary Fund (2006¹), the Qatari gross domestic product (GDP) based on purchasing power parity was estimated to be about \$25 billion² in 2005 and the per capita GDP based on purchasing power parity was estimated to be about \$31,400. The real GDP growth rate was 5.5% compared with a revised 9.3% increase in 2004. In 2005, the natural gas and oil sector accounted for about 67% of Government revenue and about 66% of the GDP (Qatar Central Bank, 2006, p. 48, 54).

Commodity Review

Metals

Iron and Steel.—In 2005, Qatar Steel Co. (QASCO) proposed to significantly enlarge its production facilities with a \$559 million expansion program. QASCO awarded Kobe Steel, Ltd. of Japan the contract to build a \$267.4-million Midrex®-process hot-discharge combination plant, which could produce 750,000 metric tons per year (t/yr) of DRI and 750,000 t/yr of hot-briquetted iron (HBI), or up to 1.5 million metric tons per year (Mt/yr) of DRI. Surplus HBI was expected to be exported. DRI output from the new plant would supplement QASCO's existing Midrex®-process DRI plant, which regularly exceeded its 400,000-t/yr-design capacity. In 2005, the old plant produced about 820,000 metric tons (t) of DRI. A subsidiary of Companhia Vale do Rio Doce of Brazil was to provide up to 2.66 million metric tons of iron pellets for the two DRI facilities under a 6-year contract (Metal Bulletin, 2005; Qatar Steel Co., 2005a§, b§; Midrex Technologies, Inc., 2006§).

Danieli & Co. Officine Meccaniche S.p.A. of Italy was contracted to install an 80-t electric-arc furnace and a 600,000-t/yr-capacity continuous-casting plant, which would expand the annual capacity of QASCO's steel plant in Mesaieed to 1.5 Mt/yr. QASCO also awarded a contract to the Voest-Alpine Industrieanlagenbau Group of Austria for the installation of a 700,000-t/yr capacity reinforcing-bar rolling mill, which would expand QASCO's total rolling capacity to about 1.5 Mt/yr (Metal Bulletin, 2005; Middle East Economic Digest, 2005b).

¹References that include a section mark (§) are found in the Internet References Cited section.

²Where necessary, values have been converted from Qatari rials (QR) to U.S. dollars (US\$) at the average exchange rate of QR3.642=US\$1.00 for 2005 and QR3.643=US\$1.00 for 2004.

Industrial Minerals

Cement.—Construction continued on Qatar National Cement Co.'s third cement plant at Umm Bab. In December, the newly formed Gulf Cement Co. proposed to build a 5,000-metric-ton-per-day (t/d)-capacity clinker kiln (Peninsula, The, 2005§).

Helium.—The initial liquid helium production from the \$115 million Ras Laffan Helium Project began on August 29. Crude helium was extracted from the country's seven liquefied natural gas (LNG) trains and subsequently purified and liquefied.

Nitrogen.—In 2005, Qatar Fertilizer Co. S.A.Q. proposed to build a fifth ammonia and urea production facility (Qafco 5) at Mesaieed. When completed in 2010, the planned \$600 million Qafco 5 would increase the company's total production capacity to 4 Mt/yr of urea from 2.8 Mt/yr and to 3.1 Mt/yr of ammonia from 2 Mt/yr (Qatar Fertilizer Co. S.A.Q., 2006, p. 18).

Industrial nitrogen gas was produced at Mesaieed by Qatar Nitrogen Co., which proposed to build an additional 200-t/d-capacity oxygen and nitrogen plant at Mesaieed and a nitrogen plant at Ras Laffan (Middle East Economic Digest, 2005a).

Mineral Fuels

Natural Gas and Petroleum.—Unlike many other countries with natural gas reserves, most of Qatar's gas was not associated with the oilfield production. As a result, gas production was not impacted by the Organization of the Petroleum Exporting Countries production quotas.

In April 2005, the Government announced a moratorium on new natural gas export projects. The suspension of new activity would not affect natural gas utilization programs that were underway. These included the construction of gas-to-liquids plants, additional LNG trains, and international gas pipelines (Gavin, 2005).

In 2005, the Ras Laffan Liquefied Natural Gas Co. Ltd. (II) officially opened the 4.7-Mt/yr LNG train 4. Construction continued on the 4.7-Mt/yr-capacity LNG train 5; completion was expected in 2007. Also in 2005, Ras Laffan Liquefied Natural Gas Co. Ltd. (III) was established and work began on LNG trains 6 and 7. Initial production from the 7.8-Mt/yr-capacity LNG train 6 was scheduled for 2008, and completion of the construction of the 7.8-Mt/yr-capacity train 7 was expected in 2009 (RasGas Co. Ltd., 2005, p. 31; Dow Jones Newswires, 2005§).

Outlook

As long as natural gas is a highly desired fuel and petrochemical feedstock, the economy of Qatar is expected to prosper. With proven reserves of nearly 26 trillion cubic meters, Qatar could provide natural gas to the international market for more than 500 years at its current (2005) production level (BP p.l.c., 2006, p. 22). The abundance of natural gas in Qatar is

expected to continue to attract energy-intensive industries, such as aluminum, in addition to more petrochemical facilities.

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Major Source of Information

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TABLE 1
 QATAR: ESTIMATED PRODUCTION OF MINERAL COMMODITIES^{1,2}

(Metric tons unless otherwise specified)

Commodity ³	2001 ⁴	2002	2003	2004	2005
Cement, hydraulic	1,240,000 ^e	1,340,000	1,400,000	1,400,000	1,400,000
Gas, natural:					
Gross million cubic meters	37,132	39,000	40,000	50,000	57,000
Dry do.	27,738	29,300	31,400	39,200	43,500
Helium	--	--	--	--	500,000
Iron and steel:					
Direct-reduced iron	733,549	750,000	780,000	830,000	820,000
Steel, crude	907,608	1,027,000 ⁴	1,054,000 ⁴	1,089,000 ^{r,4}	1,057,000 ⁴
Semimanufactures:					
Billet	891,117	275,000 ^r	300,000	300,000	300,000
Bars	713,500	741,000 ^{r,4}	747,000 ^{r,4}	782,000 ^{r,4}	750,000
Natural gas liquids thousand 42-gallon barrels	26,726	27,000	60,000 ^r	75,000 ^r	100,000
Nitrogen:					
N content of ammonia	1,159,118	1,166,100 ⁴	1,185,300 ⁴	1,428,000 ⁴	1,750,000 ⁴
N content of urea	779,388	798,700 ⁴	800,000	1,040,000 ^{r,4}	1,390,000 ⁴
Petroleum:					
Crude thousand 42-gallon barrels	237,000 ^e	230,000	274,000	287,000	290,000
Refinery products:					
Gasoline do.	4,948	4,020	14,900	15,000	15,500
Kerosene do.	3,911	2,450	7,370	7,400	7,500
Distillate fuel oil do.	3,824	4,340	7,370	7,400	7,500
Residual fuel oil do.	4,492	2,850	2,880	2,900	3,000
Other do.	514	2,100	9,560	9,600	10,000
Total do.	17,689	15,800	42,100	42,300	43,500
Stone, limestone	900,000 ^e	900,000	950,000	1,000,000	1,000,000
Sulfur	220,824	250,000 ^r	300,000 ^r	360,000 ^r	360,000

^eEstimated. ^rRevised. -- Zero.

¹Estimated data are rounded to no more than three significant digits; may not add to totals shown.

²Table includes data available through August 31, 2006.

³In addition to the commodities listed, clays, dolomite, gypsum, lime, sand and gravel, shale for construction purposes, and methanol are produced in Qatar, but available information is inadequate to make estimates of output.

⁴Reported figure.